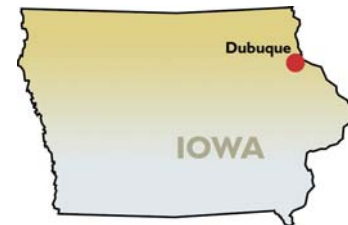


**PETROLEUM PLUME REMEDIATION SITE*****Innovative Cleanup Technology used on  
Petroleum Plume along Mississippi River***

|   |   |
|---|---|
| <b>ADDRESS:</b>   | 3rd and Bell Streets, Dubuque, IA 52001                           |
| <b>PROPERTY SIZE:</b>   | 5 acres   |
| <b>FORMER USE:</b>  | Petroleum Storage   |
| <b>CURRENT USE:</b>   | Parking Lot   |
| <b>EPA GRANT RECIPIENT:</b>   | <b>PROJECT PARTNERS:</b>  |
| The City of Dubuque received a \$200,000 EPA Brownfields Cleanup Grant. | State of Iowa, other federal partners and private property owners |



For additional data and geographic information for this and other Brownfields Grants, please visit EPA's:  
**Envirofacts** - [www.epa.gov/enviro/html/bms/bms\\_query.html](http://www.epa.gov/enviro/html/bms/bms_query.html)  
**Enviromapper** - [www.epa.gov/enviro/bf](http://www.epa.gov/enviro/bf)

**PROJECT BACKGROUND:**

Dubuque, Iowa underwent a transformation with the redevelopment of its port and waterfront area. Situated on the banks of the Mississippi River, Dubuque's once vibrant industrial and manufacturing port area fell into decline and disrepair. The city's efforts to redevelop the waterfront have turned the area into *America's River Campus*, complete with entertainment and recreational venues such as the Grand Harbor Resort and Waterpark, a riverfront casino, plaza, amphitheater, as well as open space and natural recreational areas. The city is bringing an innovative technology to bear at a vacant lot used for parking; it is using a Brownfields Cleanup grant to address a petroleum plume—resulting from former use as an above-ground petroleum storage tank yard—that is contaminating a five-acre area between the hotel and the riverfront casino. Petroleum hydrocarbons exist in the soil and ground water and in order to return this property to productive use, cleanup was deemed necessary. Its proximity to the Mississippi River underscores the importance of addressing the ground water contamination.



Cleanup work on the petroleum plume beginning at America's River Campus in Dubuque, Iowa

**KEY ACCOMPLISHMENTS:**

- A \$200,000 EPA Brownfields Cleanup grant is being used to clean up a petroleum plume on the property.
- The innovative cleanup remedy—Multi-Arrayed Vacuum (MAV) extraction—has been successful in injecting 9,000 gallons of peroxide for treatment and extracting 1,100 gallons of petroleum hydrocarbons from soil and ground water.
- The cleanup is occurring in situ (i.e., onsite), therefore the technology has minimal impact on the property and the parking lot is still in use while cleanup continues. Cleanup is expected to be complete in 2009.
- The project received the 2005 EPA Region 7 Phoenix Award for "Recognition for Excellence in Brownfield Redevelopment" for the entire America's River Campus project. The city has successfully implemented a redevelopment vision that is a nationally recognized model for redevelopment.

**OUTCOME:**

Using the MAV extraction technology to address the petroleum plume is helping to protect the natural environment on the waterfront campus and the Mississippi River, and allowing for additional riverfront development. Once cleanup is complete, the parking lot may be used to expand the Grand Harbor Resort and Waterpark or to connect the various establishments present on the entire 64-acre waterfront property. Cleanup of the five-acre petroleum plume is essential to the redevelopment goals of the Phoenix Award winning America's River Campus. For Dubuque, the overall project represents a major shift from underused industrial waterfront to land that enhances the beauty of the Mississippi River, the economy, and the quality of life for residents.